

Notice of Allowability

Application No.

10/076,942

Examiner

Dalip K. Singh

Applicant(s)

CHAMPION ET AL.

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1-10-2005.
2. ☒ The allowed claim(s) is/are 1,2,4,5,7-10,13-24,27-31,34-36 and 39.
3. ☒ The drawings filed on 10 January 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/23/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Kee M. Tung
Primary Examiner

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to applicant's amendment dated January 10, 2005 in response to PTO Office Action dated October 5, 2004. The amendments to claim(s) 1, 4-5, 7, 13-16, 20, 27-30, 34-35, and 39; and the cancellation of claims 3, 6, 11, 12, 25, 26, 32, 33, 37, 38, 40 and 41 have been noted and entered in the record, and applicant's remarks have been carefully considered resulting in the action as set forth herein below.

2. Claims 1, 2, 4, 5, 7-10, 13-24, 27-31, 34-36 and 39 are allowed.

3. The following is an examiner's statement of reasons for allowance: The prior art fails to disclose a checkerboard buffer page system with a data source, data destination with data being provided in a first order and being received in a second order; data elements being stored to the memory devices in the first order and retrieved in the second order; data elements that are consecutive in the first order are stored in parallel to the memory devices and where at least two data elements that are consecutive in the second order are retrieved in parallel from the memory devices; and where addresses for storing and retrieving pixel data are generated using one or more counter variables, where counter variables include pixel page column variable, pixel page row variable, pixel page horizontal variable for counting pixel pages horizontally and a pixel page vertical variable for counting pixel pages vertically. U.S. Patent No. 6,278,645 B1 to Buckelew et al. **discloses** high speed video frame buffer utilizing two banks storing first and second contiguous blocks of pixel information being stored in first and second banks respectively, so that there results a checkerboard form of allocation of pixels of the image over the display. However, Buckelew et al. **fails to disclose** making use of counter variables for storing and retrieving pixel data.

4. The following references made of record but not relied upon are pertinent to the instant application:

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U.S. Patent No. 6,278,645 B1 to Buckelew et al. (High speed frame buffer).

U.S. Pat. No. 6,259,459 B1 to Middleton (image data processing of pixel data arranged in raster lines and stored within an image frame memory prior to being manipulated by an image processor).

U.S. Pat. No. 5,619,471 to Nunziata (memory controller for both interleaved and non-interleaved memory).

U.S. Pat. No. 5,606,650 to Kelley et al. (simultaneous retrieval of multiple pixels).

U.S. Pat. No. 5,781,201 to McCormack et al. (atypical pixel storage in video memory).

U.S. Pat. No. 5,924,111 to Huang et al. (interleaving data in multiple memory bank partitions).

U.S. Pat. No. 6,301,649 B1 to Takasugi (enabling quick serial access in row or column directions).

U.S. Pat. No. 5,815,169 to Oda (simultaneous selection of adjacent horizontal and vertical addresses in a frame memory).

U.S. Pat. No. 6,005,592 to Koizumi et al. (improved memory access for high speed 3-D image processing).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(571) 272-7792**. The examiner can normally be reached on Mon-Friday (10:30AM-6: 30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ulka Chauhan**, can be reached at **(571) 272-7782**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dalip K. Singh
Examiner, Art Unit 2676

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June 12, 2005


Kee M. Tung
Primary Examiner